

# Trade-off or Pecking Order Theory in Indonesia

Arief Yulianto Rini Setyo Witiastuti Anindya Ardiansari  
 Jurusan Manajemen, Fakultas Ekonomi, Universitas Negeri Semarang

## Abstract

The objectives are (1) to find out the dynamic TOT or POT theory in making capital structure decisions. The research approach is quantitative, with a type of explorative research, to determine the applicability of the TOT or POT theory. Data used are secondary data on interval scale and ratio used (1) debt asset ratio and business risk come from ICMD, annual report, IDX statistics (2) interest rates are from Bank Indonesia. The sample of this company is 63 companies that have document completeness for 10 years (2006-2015), so that there are 630 observation units, with each sector (1) 18 companies basic industry and chemical sectors (28.6%) (2) 13 sector companies trade, services and investment (20.6%) (3) 5 miscellaneous industry sector companies (7.9%) (4) 11 consumer goods industry sector companies (17.5%) (5) 6 sector construction companies (9.5%) (6) 4 sector companies infrastructure, utilities and transportation (6.3%) (7) 4 sector mining companies (6.3%) and (8) 2 agriculture sector companies (3.2%). The results of the study are public companies in Indonesia tend to use dynamic trade-off approach compared to dynamic pecking orders. The company adds debt in the capital structure because marginal benefits are greater than marginal costs

## Introduction

The decision of the company's capital structure is one of the issues in the field of management of finance which is still a puzzle. Since Modigliani and Miller (1958) explain the theory of capital structure the Irrelevance of Capital Structure, then the TOT and the POT is static to develop in the model more realistic.

Description of Rajan and Zingales (1995) in Darminto and Manurung (2010) explains in tune with the POT, where the average debt-assets ratio (DAR) of companies in Indonesia is huge compared to other countries (table 1). This indication shows the role of intermediation and the preferences of the companies towards the role of the banking sector is dominant. So if the company experience a deficit of financial the source of the funding debt is of higher priority than equity.

Table : DAR

Country	DAR	Country	DAR
US	0.24	Italia	0.28
Jepang	0.24	Inggris	0.16
Jerman	0.16	Kanada	0.27
Perancis	0.23	Indonesia	0.41
Rerata	0.25		

Source: Darminto dan Manurung (2010)

However from the time series data show different results, such as results of observations on the Average Debt to Equity Ratio (DER) of the company per sector in Indonesia in the years 2007-2015 show support to the theory of trade off (TOT). The company will dynamically adjust their capital structure adjust with taxes, cost of bankruptcy, cost of keagenen, the cost of the transaction. At a time when the cost of issuing stock is cheaper than debt, then the company will issue shares and vice versa. The company will determine the capital structure and look for a level of leverage that is optimal. Ang and Jung (1993) describe research in South Korea the same condition is almost the same with a company in Indonesia, that is more on a debt but when the use of debt telah exceeds the target, then the company will issue equity. Support of previous studies (DeAngelo and Masulis, 1980; Titman and Wessel, 1988; Slutz, 1990; Wald, 1999; Rajan and Zingales, 1995)

## Literature Review

### Inkonsistensi TOT dan POT

The inconsistency of the TOT and the POT

Static TOT explains the company will add debt in the capital structure if the marginal benefit is still greater than the marginal cost. The benefits that can be obtained is the presence of savings taxes. But with the addition of debt the greater the potential risk of bankruptcy is greater. Therefore a trade-off in the decision of capital structure by considering the marginal benefit and marginal cost (Ang and Jung, 1993; Rajan and Zingales, 1995).

Darminto and Manurung (2010) explains that the company will do a modification of the POT and the TOT in the decision of capital structure that can be described in the market timing theory. The POT describes the preferences of the funding based on the asymmetry of information. By using a source of external funding then the asymmetry of information is greater than at the time of use source of internal funding

## Inkonsistensi Faktor yang Mempengaruhi Speed of Adjustment

### Inconsistency Factors that Affect the Speed of Adjustment

Risk can be categorized as risk-systematic and unsystematic. Risk systematic risk is the risk that cannot be controlled by companies such as macro-economic conditions, are not systematic business risk that can be measured by the company. Both the risk result in a change of the speed of adjustment. The greater the risk faced by the more fluctuating funding required, so that the company is required to respond

## Research Method

### Metode Penelitian

1. Testing of TOT or POT in the capital structure decision

$$(L_{i,t} - L_{i,t-1}) = \gamma_{i,t}(L_{i,t}^* - L_{i,t-1}) + \varepsilon_{i,t}$$

Measurement test of POT or TOT in the decision of capital structure in this study using the model of Shyam-Sunder and Myers (1999), Fama and French (2002) and in Indonesia used Fuady (2014). This Model assumes that changes in capital structure or debt ratio can be explained by the presence of the deviation of the level of existing debt, as in the following equation

$$D_{i,t} - D_{i,t-1} = \delta(D_{i,t}^* - D_{i,t-1}) + \mu_{i,t}$$

where  $D_{i,t}^*$  and  $D_{i,t}$  are the target and the actual debt ratio or capital structure. The Target capital structure is measured based on factors explanatory, while the actual is recorded at the book value ratio debt asset

## Results and Discussion

If X1 is the risk and the X2 is the interest rate, and Y is the target leverage, then the equation is  $Lev^* = 0.3504 + 1.32 \text{ rate} + 0.000061 \text{ risk}$

So,

$$D_{i,t} - D_{i,t-1} = \delta(D_{i,t}^* - D_{i,t-1}) + \mu_{i,t}$$

$$D_{i,t} - D_{i,t-1} = 0.35(D_{i,t}^* - D_{i,t-1}) + \mu_{i,t}$$

Coefficient  $\delta = 0.35$  from that of the criteria if , then the decision of the capital structure follow is not based on the model of TOT, was if , then it follow the model of TOT

This result can be diinterpretasikan that the funding of the company follow the model of TOT.

It can be interpreted that the company's non-financial listed on the stock exchange in the sector of non-financial follow the model of TOT. The decision of the company's capital structure refers to the consideration of the marginal cost of debt and benefit value. If there are still benefits from the addition of debt (tax deductible), then the company will increase debt to not obtained benefits again.

Public companies in Indonesia tend to use approach to trade-off a dynamic in the decision of capital structure. During still found the presence of marginal benefit greater than marginal cost then the company will increase the ratio of leverage. The Marginal benefits of increased leverage are (a) tax deductible and (b) the consideration of the agency problem. For companies still get the benefits of tax savings from the debt then the company will increase the leverage ratio. In addition, the debt can be beneficial for the company as a mechanism of bonding and monitoring

## Conclusion

Based on the approach TOT, financial managers need to pay attention to reserve borrowing capacity or the ability of the reserves to publish the debt back when taking into account the capital structure is optimal. Managers are expected to issue debt can be keeping the amount of debt the actual is at a safe level (range of 30% to 50% of the target debt is optimal) so that the target debt is optimal is not exceeded. It is useful if at any time the company requires additional funds, it can keep issuing debt back with can still prevent yourself from the risk of bankruptcy

## Reference

- Amidu, M. 2007. Determinants of Capital Structure of Banks in Ghana: An Empirical Approach. *Baltic Journal of Management Vol 2 Iss 1*
- Byoun, 2002. Emprical of Dynamic Capital Structure: Pecking Order VS Trade Off. *2002 Proceedings of the Midwest Business Economics Association*
- Chen, J. J. 2004. Determinants of capital structure of Chinese-listed companies. *Journal of Business Research, 57(12), 1341-1351*
- Chen, Lli Ju dan Chen, Shun-Yu. 2010. How the Pecking-Order Theory Explain Capital Structure. Paper at Chang Jung Christian University, Taiwan.
- Darminto dan Manurung, AH. 2008. Pengujian teori Trade Off dan Pecking Order dengan Satu Model Dinamis pada Perusahaan Publik di Indonesia. *Jurnal Manajemen Bisnis Vol 1 No 1 Mei, 2008*

- Deesomsak, R., Paudyal, K., dan Pescetto, G. 2004. The determinants of Capital Structure: Evidence from The Asia Pacific Region. *Journal of Multinational Financial Management*, 14(4-5), 387-405.
- Flannery, M.J dan Rangan, K.P. 2006. Partial Adjustment Toward Target Capital Structures. *Journal of Financial Economics* 79 (2006) 469 – 506
- Frank, M.Z dan Goyal V.K. 2003. Testing the Pecking Order Theory of Capital Structure, *Journal of Financial Economics*, 67, pp. 217-248.
- Goldstein, Robert; Ju, Nengjiu dan Leland, Hayne. 2001. An Ebit-Based Model of Dynamic Capital Structure. *Journal of Business*, 2001, vol. 74, no. 4
- Graham, John R. 2000. How Big Are the Tax Benefits of Debt. *The Journal of Finance*, Vol. 55, No. 5. (Oct., 2000), pp. 1901-1941
- Halov, Nikolay.2006. Dynamics of Asymmetric Information and Capital Structure. *Paper Discussion November 2006, NYU Stern School of Business*
- Klien, L.S; O'Brien, T.J dan Peters. S.R. 2002. Debt vs Equity and Asymmetric Information: A Review. *The Financial Review* 37 (2002) pp 317-350
- Kraus dan Litzenberger. 1973. A State Preference Model of Optimal Financial Leverage. *Journal of Finance* 28
- Matemilola, BT; Ahmad, Rubi, Kareem, S.D; Mautin O.D dan Sakiru, Oladipo, KS. 2015. Dynamic Relationship between Debt and Cash Flow in Pecking Order Theory: Evidence From Panel GMM. *Journal of Marketing and Consumer Research Vol 6*
- Miglo, A. 2010. The Pecking Order, Trade-off, Signaling and Market Timing Theories of Capital Structure: A Review. *MPRA Paper No. 46691, posted 6. May 2013 19:07 UTC*
- Modigliani, Franco dan Miller, Merton H. 1963. Corporate Income Taxes and the Cost of Capital: A Correction. *The American Economic Review*, Vol. 53, No. 3. (Jun., 1963), pp. 433-443
- Myers S.C dan Majluf N. 1984. Corporate Financing and Investment Decisions when Firms Have Information that Investors do not Have. *Journal of Financial Economics*, 13, 187-221
- Myers, S.C. 1993. Still Searching for Optimal Capital Structure. *Journal of Applied Corporate Finance Vol 6 Issue 1*
- Oolderink, Pim. 2010. Determinants of Capital Structure: Static Trade-off Theory vs. Pecking-Order Theory Evidence from Dutch Listed Firms
- Rajan, R.G dan L. Zingales. 1995. What do We Know about Capital Structure? Some Evidence from International Data. *Journal of Finance*. 50, 1421-1460
- Titman, Sheridan dan Wessels, Roberto. 1988. The Determinants of Capital Structure Choice. *The Journal of Finance*, Vol. 43, No. 1. (Mar., 1988), pp. 1-19
- Wendells, Thomas Hartmann; Ingrid Stein dan Alwin Stöter. 2012. Tax Incentives and Capital Structure choice: Evidence From Germany. *Discussion Paper Deutsche Bundesbank No 18/2012*